

## REMARKS

Applicant requests favorable reconsideration and allowance of this application in view of the foregoing amendments and the following remarks.

Claims 1, 3, 5, 7-12, 17, 19, 20, 24, and 26-28 are pending in this application, with Claims 1, 20, 24, and 28 being independent.

Claims 2, 4, 6, 13-16, 18, 21-23 and 25 have been cancelled without prejudice. Claims 1, 3, 17, 19, 20, and 24 have been amended and new Claim 28 has been added. Applicant submits that support for these amendments can be found in the original disclosure, and therefore no new matter has been added..

Claims 1, 6, 9, 14, 15, 17, 18, 24, 26, and 27 are rejected under 35.U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,765,561 (Chen et al.). Applicant respectfully traverses this rejection for the reasons discussed below.

As recited in independent Claim 1, the present invention includes, *inter alia*, the feature of calculating the orientation and/or position of a measurement object on the basis of a measured value of the orientation at an image pick-up visual point of an image pick-up device and updated calculation information for calculating the orientation and/or position of the measurement object on the basis of the measured orientation. The calculation information is updated based on a detected position of an index in a target image. Hence, the orientation and/or position of the measurement object is calculated based on the measured orientation value and the position of the index in a target image.

Further, as recited in Claim 1, the position of the index is detected by obtaining a prediction position of the index using a measured orientation value, generating

a peripheral area around the prediction position in a picked-up image subjected to a rotational process on the basis of a rotational angle in a roll direction of the image pick-up device derived from the measured value, outputting the generated image as a target image, and detecting the index in the target image using a template matching process.

Applicants submit that the cited art fails to disclose or suggest at least the above-mentioned features. Chen et al. discloses generating a 3D model from a 2D image obtained by a device 5, and superimposing a virtual image generated according to the 3D model onto a video image. That patent discloses adding marker information to a 3D image by adding a marker to the 2D image. However, Applicant submits that neither that patent, nor the other art of record, discloses or suggests at least the above-mentioned features of Claim 1.

Independent Claim 24 also recites, among others, the features of calculating the orientation and/or position of a measurement object on the basis of a measured value and updated calculation information, detecting the position of an index in a target image by performing template matching, and updating calculation information on the basis of a detected position of the index. Applicant submits that the cited art fails to disclose or suggest at least those features.

Claims 2, 19, 20, and 21 are rejected under 35.U.S.C. §103(a) as being unpatentable over Chen et al. in view of U.S. Patent No. 5,631,227 (Schneider). Applicant respectfully traverses this rejection.

As recited in independent Claim 20, the present invention includes, *inter alia*, the features of creating a target image having a peripheral area around a prediction position similar to the corresponding feature discussed regarding Claim 1, and detecting a

position of an index by performing a template matching process. Applicants submit that the cited art, whether considered individually or in combination, does not disclose or suggest at least those features. New Claim 28 recites similar features and is believed to distinguish over the cited art for similar reasons.

For the foregoing reasons, Applicant submits that independent Claims 1, 20, 24, and 28 are patentable over the art of record. The dependent claims are believed patentable for similar reasons, as well as for the additional features they recite.

In view of the foregoing, this application is believed to be in condition for allowance. Favorable reconsideration, withdrawal of the outstanding rejections, and an early Notice of Allowance are sought.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,



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